

Water Resources Planning

National Park Service
U.S. Department of the Interior
Natural Resource Program Center
Water Resources Division



PROGRAM PURPOSE

To provide parks with comprehensive planning services/products, covering the full spectrum of water resources, that will assist in their efforts to achieve or maintain water resource integrity.

INTRODUCTION

The Water Resources Planning Program has been operating in its present form since 1991 with the continued development of *Water Resource Issues Overviews*, *Water Resources Scoping Reports* and *Water Resources Management Plans (WRMPs)* for units across the national park system. While this program has been successful -- over 65 planning products covering over 30 million acres of the national park system -- recent changes in NPS general planning (update of *Park Planning Program Standards*) and resource planning (draft *Director's Order 2.1: Resource Stewardship Planning*) will require a programmatic revision of the Water Resources Planning Program to assure that its products support the new NPS planning standards and objectives. These changes propose new planning documents, such as the development of *Foundation for Park Planning and Management* and the *Resource Stewardship Plan*.

IMPORTANCE OF WATER RESOURCE PLANNING IN THE NPS

Water is a particularly important and sensitive ecosystem component, and it plays a central role in the social, economic, environmental, and political mosaic of units of the national park system. Its physical availability and quality are critical determinants of a park's overall natural resource condition. Because of the important role of water in maintaining resource condition, it is the policy of the NPS to maintain, rehabilitate, and perpetuate the inherent natural integrity (Figure 1) of water resources and water-dependent environments occurring within the national park system.

Proper management of water resources within the NPS is becoming more complex and challenging as threats to this resource, both internal and external to park boundaries, increase. Scientists and managers are increasingly called upon to respond to disruptions of water resources that threaten

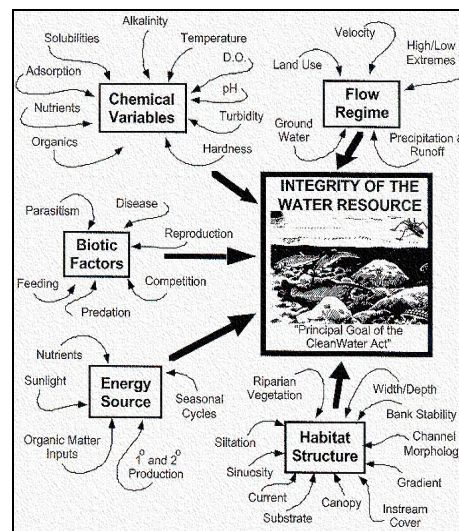


Figure 1. Factors important to the integrity of water resources.

the quality of human life and environmental sustainability. However, less than 10 percent of those parks with significant water resources have any type of aquatic resource specialist. It was with those parks in mind that the Water Resources Division initiated a planning program in 1991. The resulting planning process and its products assisted in the development of park-wide management strategies and ensured that park managers and policy makers had adequate and timely information to protect, enhance, and use water resources.

WATER RESOURCES PLANNING - 2005 AND BEYOND

Director's Order 2: Park Planning (DO-2) was issued in May 1998, amending the NPS *Management Policies* then in effect. The policies described in DO-2 were subsequently incorporated into the 2001 NPS *Management Policies* and the DO sunsetted in May 2002.

After several years of experience with the new policy and standards derived from DO-2, the

park planning program undertook a review seeking opportunities for improvement, especially in the area of resource management. That review became official with the issuance in August, 2004 of replacement *Park Planning Program Standards* (Figure 2).

A logical flow is established through several levels of planning that become increasingly detailed and complementary by agreeing first on why a park was established and what resource conditions should exist, and then increasingly focused on how those conditions should be achieved. Planning and decision making also become more detailed through time. Within this framework, planning and decision making are accomplished through six discrete kinds of planning, resulting in six kinds of planning-related documents (Figure 2), two of which are new;

➤ **Foundation for Planning and Management:** The purpose of the foundation document is to define clearly the legal and policy requirements that mandate the park's basic management responsibilities, and to identify and analyze the resources and values that are fundamental to achieving the park's purpose or otherwise important to park planning and management. This document may be developed as a separate document in advance of the General Management Plan (GMP) or as phase one of the GMP.

➤ **Program Management Plan:** The latest park planning standards make a greater distinction between program planning and other kinds of implementation planning. Program Plans are now placed between GMPs and strategic plans. Through program planning, parks are able to translate the qualitative statements of desired conditions established through the GMP process into measurable or objective indicators that can be monitored to assess the degree to which the desired conditions are being achieved. Based on information obtained through this analysis, comprehensive strategies are developed to achieve the desired conditions. DO 2.1 (*in draft*) specifically addresses the development of a *Resource Stewardship Plan*, the Program Management Plan for natural and cultural resources.

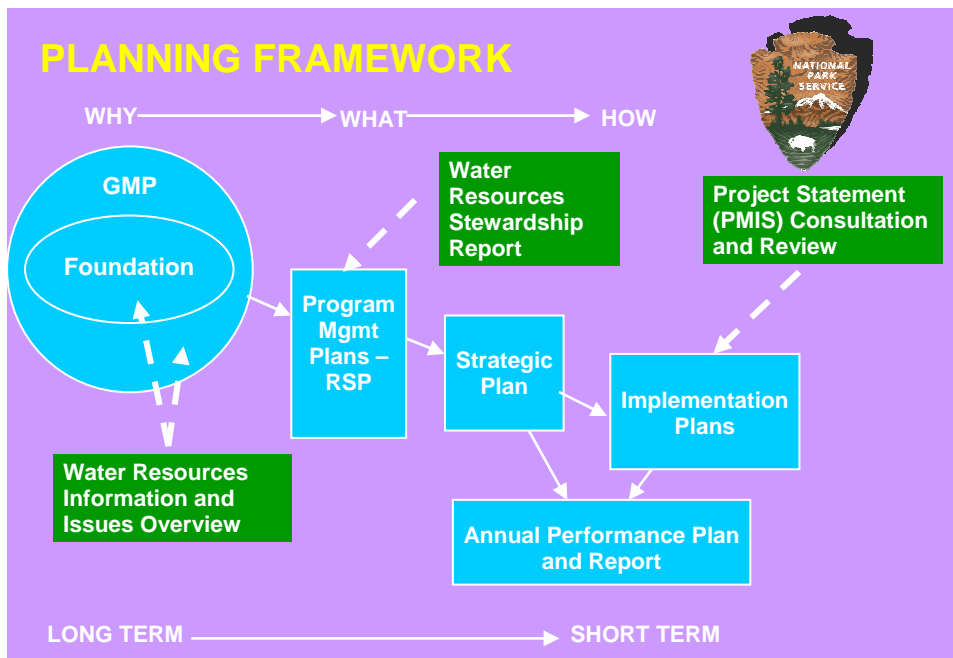


Figure 2. The 'new' NPS framework for planning and decision making (blue boxes). Green boxes represent WRD planning products or assistance. RSP = Resource Stewardship Plan.

It is the requirements of these two documents that form the basis for the new NPS water resources planning framework. We now offer a *Water Resources Information and Issues Overview* that is designed to address the needs of either the *Foundation for Planning and Management* document or phase one of the GMP (Figure 2). Its anticipated timeframe for completion is from two to four months, and it would be published as part of WRD's technical report series. Elements of the *Water Resources Information and Issues Overview* include the identification and analysis of the impact of laws, policies, regulations, and specific park mandates as they relate to water resources, and identification and analysis of those aspects of water resources (i.e., physical, chemical and biological) that warrant consideration in park planning and management. When information is available, this latter analysis would be based on: 1) an assessment of existing water resource conditions; 2) the importance of park water resources from both a watershed and regional context; 3) an interpretation of the optimum condition based on NPS management policies with a comparison to existing conditions; 4) a trend analysis on water resource conditions that are changing; 5) identification of the major issues affecting trends in water resources; 6) the range of known stakeholder interests in water resources; and 7) an analysis of policy-level issues -- the potential for some or all water resources to be detrimentally affected by management decisions intended to achieve desired conditions. This document will be flexible in its design in order to serve park needs. For example, a water resource-based park, such as a wild and scenic river, may have

a basic need to inform stakeholders of the condition of its water resources and to identify and analyze all water resource issues that it faces. However, because of priorities, that park is years away from the start of a new GMP. With additional effort, the *Water Resources Information and Issues Overview* could serve that need.

The *Water Resources Stewardship Report* is designed specifically to address the water resource needs in a park's *Resource Stewardship Plan* (Figure 2). That report will: 1) define the park's desired conditions from its GMP in terms of objective, measurable values for water resources or, if desired conditions are inappropriate or lacking because a GMP is dated or not existing, develop interim desired conditions with concomitant measurable values for water resources; 2) summarize existing water resource information, and if insufficient, develop strategies for its acquisition; 3) assess existing water resources in terms of measurable values in comparison with the values defined for achievement of desired conditions -- if information is incomplete or lacking quality, describe strategies for its acquisition; 4) describe trends in park water resource conditions based on available monitoring information -- if information is insufficient, develop strategies for its acquisition and analysis; 5) identify and analyze water resource management issues that are impediments to achievement and maintenance of desired conditions -- including issues responsible for differences between existing and desired resource conditions or that may affect the achievement and maintenance of desired conditions; 6) develop long-term,

comprehensive water resources strategies to achieve and maintain the desired resource conditions; and 7) assess the effectiveness of previous and current water resource management actions in achieving or maintaining desired resource conditions and the implications for the comprehensive strategies. This document is anticipated to be completed in six to nine months, and published as part of WRD's technical report series.

The *Water Resources Information and Issues Overview* and the *Water Resources Stewardship Report* may be considered renamed extensions of the original *Water Resource Issues Overview* and *Water Resources Scoping Report*, respectively. However, there is no logical extension of the original *Water Resources Management Plan*. There are two primary reasons for this: 1) this plan was programmatic and strategic in its concept, elements now covered in the *Resource Stewardship Plan*; and, 2) given the 5-year time frame of the *Strategic Plan*, much of what the WRMP projects in the long-term may become outdated by the time priorities are sufficiently high to be addressed in the present or succeeding strategic plans. In place of the WRMP we now offer consultation and review of water-based, PMIS project statements that address the priorities of the Strategic Plans.

FOR FURTHER INFORMATION CONTACT

David Vana-Miller (Program Leader)
303-969-2813

David_Vana-Miller@nps.gov
or

Don Weeks
303-987-6640
Don_Weeks@nps.gov

National Park Service
Water Resources Division
P.O. Box 25287
Denver, Colorado 80225

WRD Planning Web Site
www.nature.nps.gov/water/planning.htm

PHOTOGRAPHIC CREDITS:

John Wullschleger, Olympic National Park
Mike Sevon, Great Basin National Park
Joel Wagner, Yosemite National Park
Kristen Keteles, Buffalo National River